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BOLLARDS & BARRIERS



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Products in this section are primarily used for traffic control, property protection and ram-raid prevention. Our bollards and barriers are available in a wide range of styles and materials to suit any application. We have a product sure to satisfy your requirements, whether it be surface mounted, in-ground, retractable or removable bollards. Manufactured from heavy wall tube in either mild steel or 304 grade stainless steel, these products are built to take the knocks.

You may also be interested in:



PEDESTRIAN SEPARATION



IMPACT ABSORBING



SPEED HUMPS



VEHICLE & PARKING

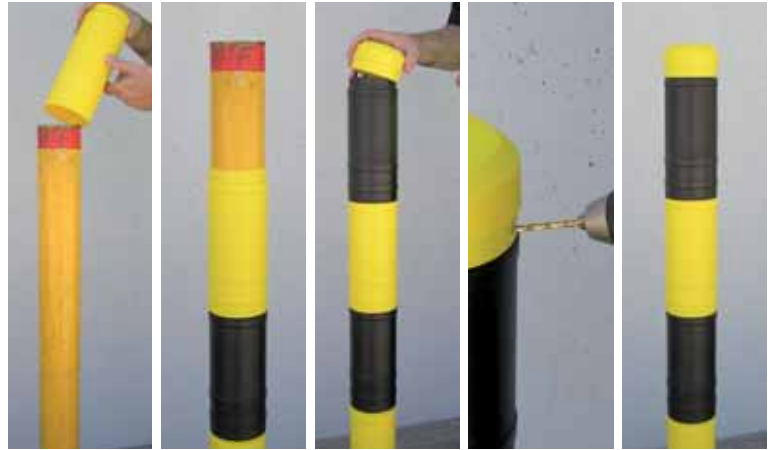
BOLLARD PROTECTION SLEEVES

Never repair scratched, rusted or faded bollards again. Barrier bollard protection sleeves offer a quick, simple and economical way to recondition old rusted, faded or scratched bollards, without ever needing to remove, replace or re-paint again. For a fraction of the cost of replacement, you can rejuvenate your old bollards.

Barrier's new modular bollard protection sleeves and caps fit any standard 140mm or 90mm dia. bollards, regardless of whether they are ours or a competitor's.

The bollard protection sleeve can be made in any colour, so they are suitable for corporate or heritage environments. Ideal for shopping centres, carparks, schools and warehouses. Particularly useful in food processing facilities where chipped or flaking paint and powdercoat surfaces are a health hazard.

Can be washed down and are not affected by most chemicals or oils etc.



Sleeve modules

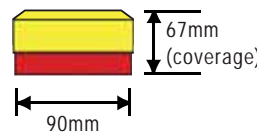
The 140mm diameter module is 300mm in length and 225mm for the 90mm diameter model. They are supplied with a class 1 self adhesive reflective band for increased night visibility. The modules can be grouped in single colours or alternating colours for additional safety awareness.

Eg. Yellow/black or red/white. Our bollard sleeves and caps offer economical long term indoor/outdoor protection and always look fresh.

TOP VIEW



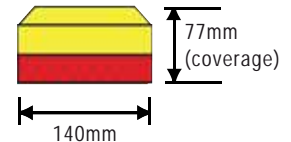
SIDE VIEW



TOP VIEW



SIDE VIEW

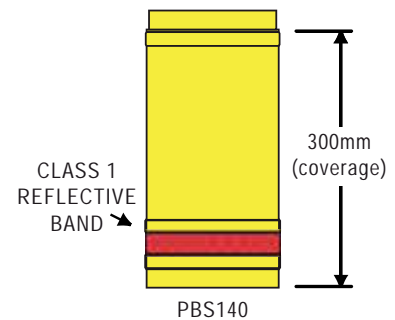
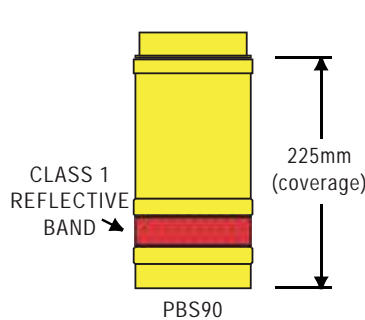
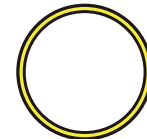
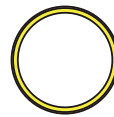


Sleeve caps

These super tough polyethylene caps complete the installation of our bollard protection sleeves. The cap is secured in place which in turn prevents the sleeves from being removed.

Value features:

- » Fits any 90mm or 140mm dia. bollards.
- » Quick, simple and economical to install.
- » Only basic tools required.
- » Four standard colours can be mixed and matched.
- » Made from hi-impact polyethylene.
- » U.V. stabilised. Won't fade, rot, rust or peel.
- » Each module supplied with class 1 reflective band.
- » Never paint again.



Never have to repair

SCRATCHED,
RUSTED or
FADED

Bollards AGAIN!



PART No.	DESCRIPTION
PBS90-Y	90mm Yellow sleeve module
PBSC90-Y	90mm Yellow sleeve cap
PBS90-B	90mm Black sleeve module
PBSC90-B	90mm Black sleeve cap
PBS90-R	90mm Red sleeve module
PBSC90-R	90mm Red sleeve cap
PBS90-W	90mm White sleeve module
PBSC90-W	90mm White sleeve cap

PART No.	DESCRIPTION
PBS140-Y	140mm Yellow sleeve module
PBSC140-Y	140mm Yellow sleeve cap
PBS140-B	140mm Black sleeve module
PBSC140-B	140mm Black sleeve cap
PBS140-R	140mm Red sleeve module
PBSC140-R	140mm Red sleeve cap
PBS140-W	140mm White sleeve module
PBSC140-W	140mm White sleeve cap



FIXED BOLLARDS – Surface mount

Our fixed surface mount bollards are designed for traffic control situations or property and asset protection. Manufactured from heavy wall mild steel tube with fully welded base plates, these bollards are able to take the hard knocks. Suitable for installation onto any concrete surface. Available in round or square designs. All our bollards are supplied complete with necessary fixings and are available in a hot dip galvanised finish or hot dip galvanised with a powder coat finish.

Chain rings

Optional chain rings are available for connecting chains or ropes to our bollards. Simply order with chain rings. Chain rings can also be purchased separately for retro fitting to existing bollards by drilling and tapping M10 threads as required.

Finish

Manufactured from mild steel and hot dip galvanised as standard with the option of powder coating as a final finish. (Safety yellow is our standard colour. Other colours are available on request).

Value features:

- » Wide range of sizes in both round or square designs.
- » Fully welded heavy steel base plate.
- » Standard class 1 reflective band.
- » **All models hot dip galvanised.**
- » Supplied with fixings for concrete installation.

⚠ PLEASE NOTE:

Polyethylene protective sleeves are available to suit round C90 and C140 bollards. For more information see Section 1.1.



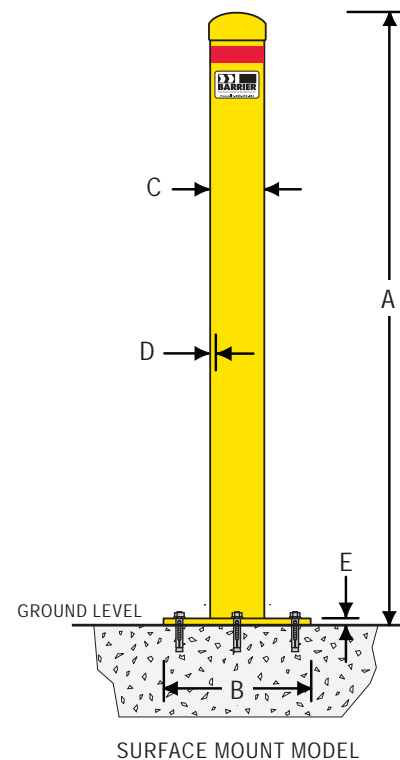
CS150SM Bollards shown.



Optional chain rings (FIX1117).



Surface mount flange.



ROUND CENTURIAN RANGE

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Weight (kg)	No. of Fixings	Size of Fixing (sleeve anchor)	Cap	Surface Finishes	
										G	P
C63SM	900	150	63.5	1.6	6	4	3	10 x 50mm	Push in	✓	✓
C63SM-G	900	150	63.5	1.6	6	4	3	10 x 50mm	Push in	✓	
C90SM	900	225	90	5.0	6	9	4	12 x 60mm	Fixed	✓	✓
C90SM-G	900	225	90	5.0	6	9	4	12 x 60mm	Fixed	✓	
C140SM	1200	300	140	5.0	10	23	4	16 x 65mm	Fixed	✓	✓
C140SM-G	1200	300	140	5.0	10	23	4	16 x 65mm	Fixed	✓	
C165SM	1300	350	165	5.0	12	34	4	20 x 75mm	Loose	✓	✓
C165SM-G	1300	350	165	5.0	12	34	4	20 x 75mm	Loose	✓	
C220SM	1300	400	220	6.4	12	45	4	20 x 105mm	Loose	✓	✓
C220SM-G	1300	400	220	6.4	12	45	4	20 x 105mm	Loose	✓	

SQUARE CENTURIAN RANGE

CS90SM	900	200 ²	90 ²	5	6	12.75	4	12 x 60mm	Welded	✓	✓
CS150SM	1200	300 ²	150 ²	5	10	32	4	20 x 75mm	Welded	✓	✓
FIX1117	Metric shoulder gold eye bolt – can be attached to any of the above when stated.										

Surface Finish: G – Galvanised. P – Powder coated safety yellow unless specified a custom colour.

FIXED BOLLARDS – Below ground

Our fixed below ground bollards are designed for traffic control situations or property and asset protection. Manufactured from heavy wall mild steel tube with welded starter bars for installation into new concrete footings. Suitable for installation in asphalt or any soft surface where a concrete footing will be necessary.

Available in round or square designs. All our bollards are hot dip galvanised with the option of a powder coated finish.



CS150BG Bollards shown.

Chain Rings

Optional chain rings are available for connecting chains or ropes to our bollards. Simply order with chain rings. Chain rings can also be purchased separately for retro fitting to existing bollards by drilling and tapping M10 threads as required.



Optional chain rings (FIX1117).

Finish

Manufactured from mild steel and hot dip galvanised as standard with the option of powder coating as a final finish. (Safety yellow is our standard colour. Other colours are available on request).

Value features:

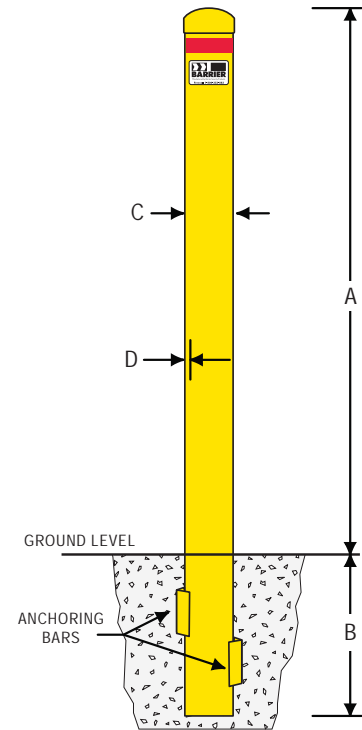
- » Wide range of sizes in both round or square designs.
- » Welded starter bars for fixing into concrete footing.
- » Supplied with class 1 reflective band.
- » All models are hot dip galvanised as standard.

PLEASE NOTE:

Polyethylene protective sleeves are available to suit round C90 and C140 bollards. For more information see Section 1.1.



Welded anchoring bars.



BELOW-GROUND MODEL

ROUND CENTURIAN RANGE

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	Weight (kg)	Anchoring Bars	Size of Anchoring Bars	Cap	Surface Finishes	
									G	P
C63BG	900	300	63.5	1.6	4	2	30 x 30 x 50mm angle	Push in	✓	✓
C63BG-G	900	300	63.5	1.6	4	2	30 x 30 x 50mm angle	Push in	✓	
C90BG	900	380	90	5.0	12	2	30 x 30 x 50mm angle	Fixed	✓	✓
C90BG-G	900	380	90	5.0	12	2	30 x 30 x 100mm angle	Fixed	✓	
C140BG	1200	500	140	5.0	29	2	30 x 30 x 100mm angle	Fixed	✓	✓
C140BG-G	1200	500	140	5.0	29	2	30 x 30 x 100mm angle	Fixed	✓	
C165BG	1300	650	165	5.0	40	2	30 x 30 x 100mm angle	Loose	✓	✓
C165BG-G	1300	650	165	5.0	40	2	30 x 30 x 100mm angle	Loose	✓	
C220BG	1300	650	220	6.4	53	2	30 x 30 x 100mm angle	Loose	✓	✓
C220BG-G	1300	650	220	6.4	53	2	30 x 30 x 100mm angle	Loose	✓	

SQUARE CENTURIAN RANGE

CS90BG	900	400	90 ²	5.0	16.5	2	30 x 30 x 50mm angle	Welded Flat	✓	✓
CS150BG	1200	500	150 ²	5.0	38	2	30 x 30 x 100mm angle	Welded Flat	✓	✓
FIX1117	Metric shoulder gold eye bolt – can be attached to any of the above when stated.									

Surface Finish: G – Galvanised. P – Powder coated safety yellow unless specified a custom colour.

STAINLESS STEEL BOLLARDS

Our round stainless steel bollards are offered in 3 designs: below ground for installation into a concrete footing, core drilled for installation into a core drilled hole using epoxy adhesive, and surface mount for bolted installations.

Manufactured from 304 grade stainless steel as standard, they are all finished with No. 4 mechanical finish before being electro-polished. This is recommended for installation near coastal areas to minimise the risk of tea staining and to ensure the bollards maintain a high quality appearance over many years.

Welded caps

All our stainless steel bollards have a fully welded and polished cap. This helps present a high quality appearance required for architectural environments.

Optional skirts

For the ultimate high quality presentation, polished stainless steel skirts are available as an option to cover the base plates and fixings.



C90SM-SS10 with optional base cover COV90-SS.

Value features:

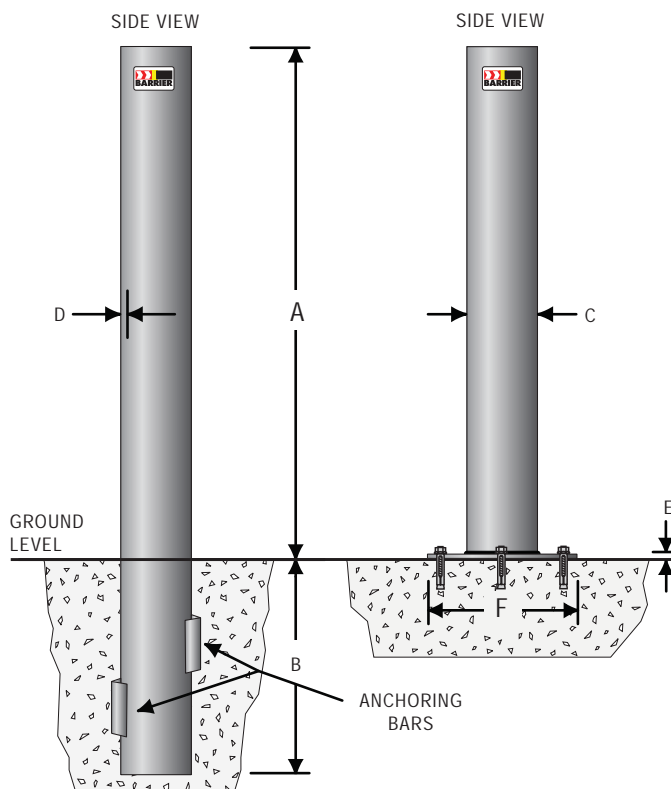
- » 304 grade polished stainless steel.
- » Electro-polished for maximum protection.
- » Choice of two wall thicknesses.
- » Three methods of installation.
- » 90 or 140mm diameter.
- » Optional cover skirts available.



Welded and polished flat cap.



Optional skirts.



BELOW-GROUND & SURFACE MOUNT MODELS

PART NO.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Stainless Grade	Weight (kg)	Cap	Surface Finishes	
										L	EP
C90BG-SS	900	300	90	5.49	–	–	304	14.5kg	Welded Flat	✓	✓
C90CD-SS	900	200	90	5.49	–	–	304	14.5kg	Welded Flat	✓	✓
C90SM-SS	900	–	90	5.49	6	225	304	10.5kg	Welded Flat	✓	✓
COV90-SS	Optional 90mm base cover – stainless steel							0.3kg	N/A	✓	✓
C140BG-SS	1200	500	140	3.40	–	–	304	25kg	Welded Flat	✓	✓
C140CD-SS	1200	200	140	3.40	–	–	304	22kg	Welded Flat	✓	✓
C140SM-SS	1200	–	140	3.40	10	300	304	19kg	Welded Flat	✓	✓
COV140-SS	Optional 140mm base cover – stainless steel							0.5kg	N/A	✓	✓

Surface Finish: L – No.4 Linished. EP – Electro-polished.

SURFACE MOUNT REMOVABLE BOLLARDS

Surface mount removable bollards are designed for applications where the floor cannot be core drilled or penetrated, such as suspended, prestressed slabs or clean areas such as food preparation or pharmaceutical processing.

They are available in two different models, the **Cam-lok** model and the **Tee-lok** model. Structurally both models are identical but offer different locking systems depending on the level of security required.

Cam-lok model

This heavy duty bollard locks into the surface mounted receiver shoe via an internal locking system which utilises a high security cam lock with registered keys. (2 keys are supplied per order. Additional keys may be purchased if required).

Tee-lok model

Our surface mount Tee-lok is exactly the same as the surface mount Cam-lok except that it does not employ high security locking. Instead, the Tee-lok uses our unique 'T' handle key to unlock and remove the bollard from the receiver shoe.

Tee-lok is ideally suited to low or medium security applications, where the aim is to stop vehicles entering unauthorised areas or separating vehicles from pedestrians, especially around work places.

Value features:

- » Strong 90mm post with 5mm thick wall.
- » Heavy steel receiver shoe only 20mm high when post removed.
- » Requires only 4 off 12mm holes, 65mm deep.
- » No core drilling or slab penetration.
- » Internal locking system with either high security cam-locks with registered keys or unique 'T' handle keys.
- » Fixings for receiver shoe are inaccessible when post locked in.
- » Optional colours available on request.

Specifications:

Description:	Surface mount removable bollards.
Material:	Steel post 90mm diameter with 5mm wall.
Finish:	Safety yellow powder coat.
Height:	950mm post height. Receiver shoe only 20mm high with post removed.
Weight:	Post 11.9kg. / Receiver shoe 2.9kg
Installation:	4 off 12 x 65mm sleeve anchors.

PART No.	DESCRIPTION
SMCL	Cam-lok surface mount bollard and shoe
BCLKEY	Additional Cam-lok registered key
SMTL	Tee-lok surface mount bollard and shoe
BRKEY	Additional 'T'-handle key for Tee-lok
SMCLH	Additional receiver shoes for Cam-lok / Tee-lok (Also used as a storage unit for bollards)



Tee-lok model shown.



Bollard installed into shoe.



Bollard to shoe interlock (SMCLH).



Cam-lok model (SMCL).



Tee-lok model (SMTL).

CAM-LOK REMOVABLE BOLLARD

– Roller door model

Cam-lok model BCL90RD is a key operated, removable bollard designed for roller door protection.

Supplied with a heavy duty door assembly, the post actually locks the door down to the ground, thereby offering maximum security against ram-raiding or levering-up of the door.

The post locks into an in-ground steel sleeve via an internal locking system using high security cam locks with registered keys. (2 supplied per order, additional keys may be purchased if required).

Value features:

- » 90mm diameter post with 5mm thick wall.
- » Post locks into a steel in-ground sleeve.
- » Internal locking system using high security cam locks, with security registered keys (2 supplied per order).
- » In-ground sleeve supplied with hinged hole cap for pedestrian safety.
- » Choice of storage units for idle posts.
- » Choice of core drilled or new concrete sleeves.
- » Optional colours available on request.

Specifications:

Description:	Key operated removable bollard.
Material:	Steel post 90mm diameter with 5mm thick wall.
Finish:	Safety yellow powder coat. Other colours on request.
Height:	Above ground 950mm. Below ground 225mm.
Weight:	Post 12.3kg. / Sleeve 3kg.
Locking:	Internal locking mechanism with high security cam locks and registered keys.
Installation:	In-ground sleeves are available in either core-drilled or new concrete footing. Please specify when ordering.



Roller door locking assembly.



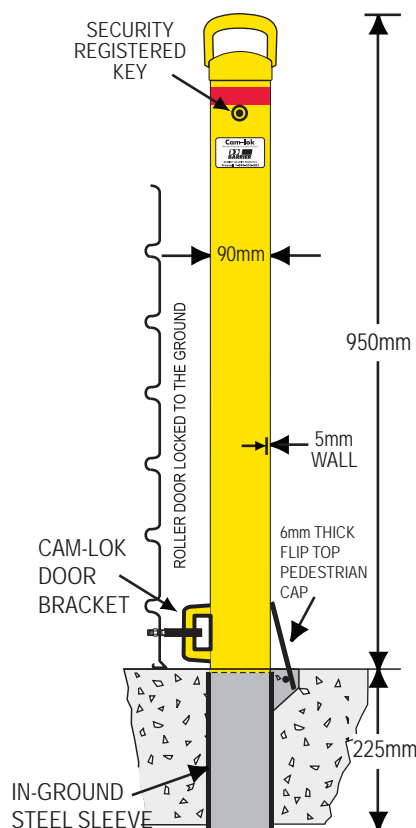
Insert-twist-lock.



Double hanging holder.



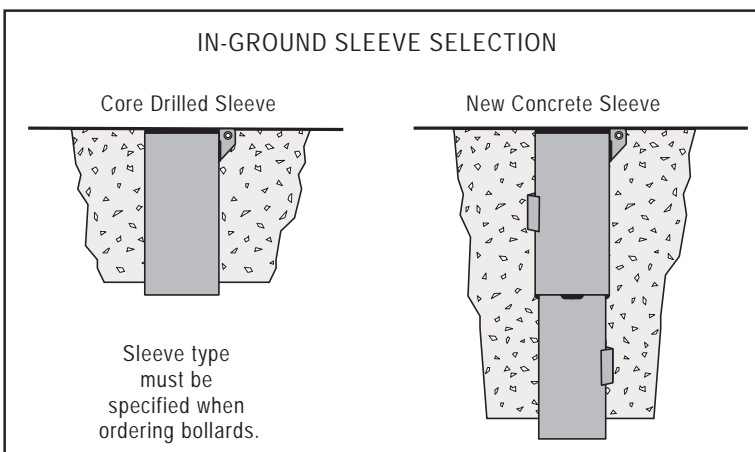
Surface mount holder.



NOTICE
REMOVE SECURITY BOLLARDS BEFORE RAISING DOOR

S1228-PP
Optional notice sign
To be installed at the door control station where the door is fitted with external bollards.

PART No.	DESCRIPTION
BCL90RD	Cam-lok 90 rollerdoor post, sleeve & brackets
BCL90S-CD	Additional core drilled sleeve (90mm)
BCL90S-NC	Additional new concrete sleeve (90mm)
BCL90H	90mm surface mount storage unit
BHH901	90mm wall mount storage unit (single)
BHH90	90mm wall mount storage unit (double)
BCLKEY	Cam-lok additional key
S1228-PP	Sign "NOTICE remove bollards etc"



CAM-LOK REMOVABLE BOLLARD – Free standing model

Cam-lok model BCL is a key operated, removable bollard post. It is designed for ram raid protection of shop fronts etc., or anywhere that unwanted vehicle access is a problem. Available in 90 or 140mm diameter, in mild steel or stainless steel.

The heavy duty post locks into the steel in-ground sleeve via an internal locking system using a high security cam lock with registered keys.

Value features:

- » Available in 90 or 140mm dia.
- » Powder coated steel or polished 304 grade stainless steel.
- » Post locks into a steel in-ground sleeve.
- » Can be installed into existing or new concrete, bitumen or gravel.
- » Internal locking system using high security cam locks, with security registered keys. (2 supplied per order).
- » In-ground sleeve with hinged hole cap for pedestrian safety.
- » Optional storage units for bollards when not in use.
- » Other colours available on request.

Specifications:

Description:	Key operated removable bollard post.
Material:	Mild steel or 304 grade stainless steel.
Finish:	Safety yellow powder coat or polished stainless steel.
Height:	BCL90 – Above ground 950mm. BCL140 – Above ground 1050mm.
Weight:	BCL90 – Post 12.3kg. / Sleeve 3kg. BCL140 – Post 21kg. / Sleeve 6.4kg.
Locking:	Internal locking mechanism with high security cam locks and registered keys.

PART No.	DESCRIPTION
BCL90	Cam-lok 90mm freestanding post & sleeve
BCL90S-CD	Additional core drilled sleeve for 90mm bollard
BCL90S-NC	Additional new concrete sleeve for 90mm bollard
BCL90-SS	Cam-lok 90mm freestanding post & sleeve (ST/ST)
BCL90SS-CD	Additional core drilled sleeve for 90mm ST/ST bollard
BCL90SS-NC	Additional new concrete sleeve for 90mm ST/ST bollard
BCL90H	Cam-lok 90mm surface mount storage unit (single)
BHH901	90mm wall mount storage unit (single)
BHH90	90mm wall mount storage unit (double)
BCL140	Cam-lok 140mm freestanding post and sleeve (steel)
BCL140S-CD	Additional core drilled sleeve for 140mm bollard
BCL140S-NC	Additional new concrete sleeve for 140mm bollard
BCL140-SS	Cam-lok 140mm freestanding post and sleeve (ST/ST)
BCL140SS-CD	Additional core drilled sleeve for 140mm ST/ST bollard
BCL140SS-NC	Additional new concrete sleeve for 140mm ST/ST bollard
BCL140H	Cam-lok 140mm surface mount storage unit (single)
BCLKEY	Cam-lok additional key

NOTE: ST/ST = 304 grade stainless steel.



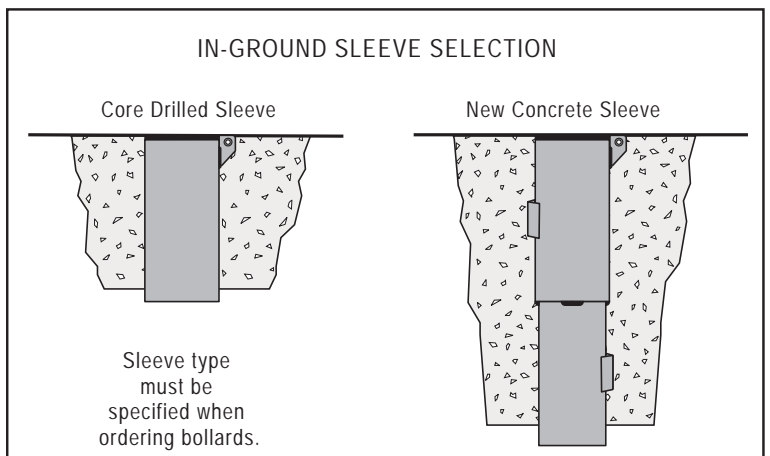
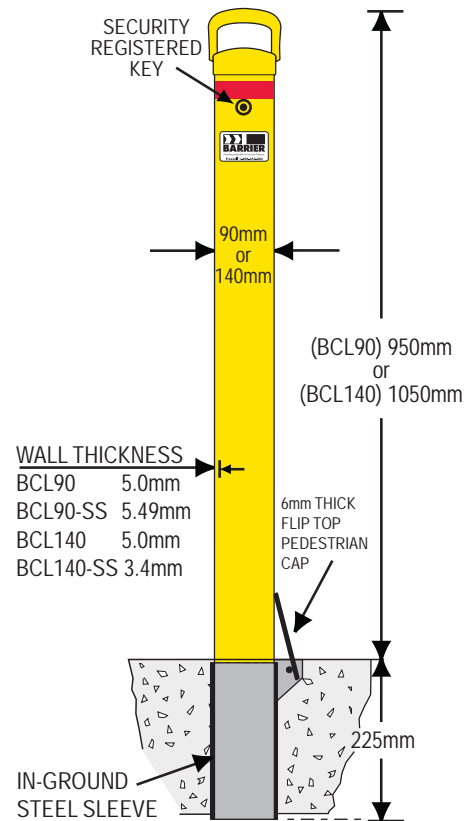
High security cam-locks with registered keys.



Double hanging holder.



Surface mount holder.





SLEEVE-LOK REMOVABLE BOLLARD

– Roller door model

Sleeve-lok model BSL90RD is designed for warehouse roller door protection.

The heavy duty steel post actually locks your roller door down to the ground, thereby offering maximum security against ram raiding or levering-up of the door.

The steel in-ground sleeve incorporates a hinged hole cap which locks the post down with a padlock.

Value features:

- » Super Strong 90mm diameter post with 5mm thick wall.
- » Post locks into a steel in-ground sleeve.
- » Can be installed into existing or new concrete, bitumen or gravel surfaces.
- » In-ground sleeve has a hinged hole cap for pedestrian safety.
- » Galvanised prior to powder coating.

Specifications:

Description:	Removable bollard post for the control of vehicle access.
Material:	Steel post 90mm diameter with 5mm thick wall.
Finish:	Galvanised or safety yellow powder coated (other colours on request).
Height:	Above ground 950mm. Below ground 225mm.
Weight:	Post 11.8kg. / Sleeve 2.5kg.
Locking:	Sleeve cap locks to post with padlock. (Padlock sold separately).
Installation:	In-ground sleeves are available in either core-drilled or new concrete models. Please specify when ordering.



BSL90RD (padlock sold separately).



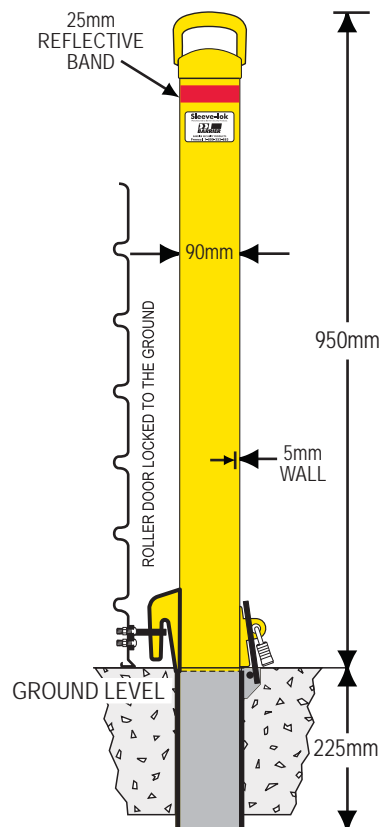
Insert and lock.



Double hanging holder.



Surface mount holder with optional padlock.



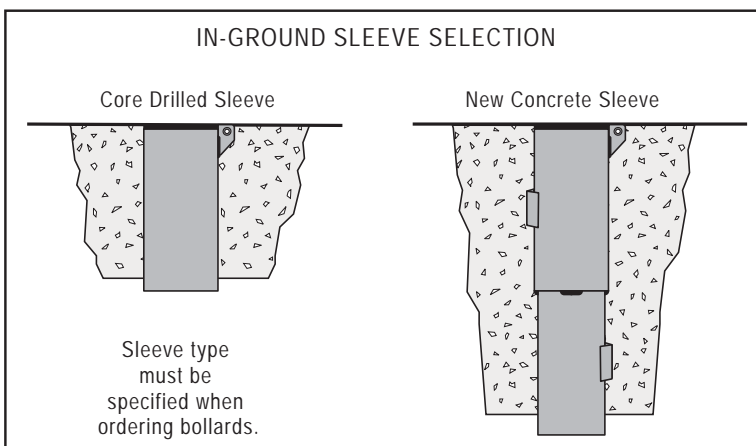
NOTICE
REMOVE SECURITY BOLLARDS BEFORE RAISING DOOR

S1228-PP

Optional notice sign

To be installed at the door control station where the door is fitted with external bollards.

PART No.	DESCRIPTION
BSL90RD-G	Sleeve-lok 90 rollerdoor post, sleeve & brackets – Galvanised
BSL90RD	Sleeve-lok 90 rollerdoor post, sleeve & brackets – Safety yellow powder coated
BSL90S-CD	Additional core drilled sleeve (90mm)
BSL90S-NC	Additional new concrete sleeve (90mm)
BSL90H	90mm surface mount storage unit
BHH901	90mm wall mount storage unit (single)
BHH90	90mm wall mount storage unit (double)
BPL2	Padlock – high security 9mm shielded shackle
S1228-PP	Sign "NOTICE remove bollards etc"





SLEEVE-LOK REMOVABLE BOLLARD – Free standing model

Sleeve-lok model BSL is designed for the protection for shop fronts, etc. and the restriction of unwanted vehicle traffic, whilst allowing the free movement of pedestrians. Available in 90 and 140mm diameter as standard and 63mm on request. The steel in-ground sleeve incorporates a hinged hole-cap which locks to the post with a padlock. Optional bollard holders are available for the storage of bollards when not in use. They are available in two styles, either surface mounted or wall mounted hanging holders.

Value features:

- » Available in two standard sizes 90mm or 140mm diameter.
- » Post locks into steel in-ground sleeve.
- » Can be installed into existing or new concrete, bitumen or gravel surfaces.
- » In-ground sleeve has a hinged hole cap for pedestrian safety.
- » Optional storage units for bollards when they are not in use.
- » Galvanised prior to powder coating.

Specifications:

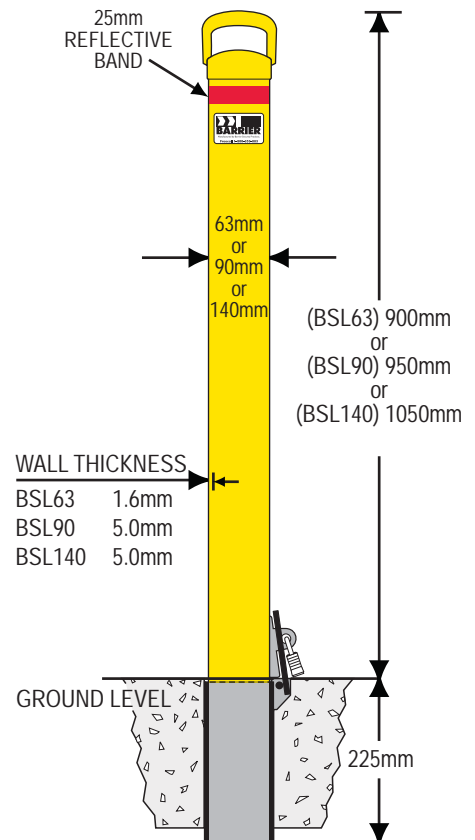
Description:	Removable bollard post for the control of vehicle access.
Material:	Steel post with 5mm thick wall.
Finish:	Galvanised and safety yellow powder coated (other colours on request).
Height:	Below ground 225mm. BSL90 – Above ground 950mm. BSL140 – Above ground 1050mm.
Weight:	BSL90 – Post 11.8kg. / Sleeve 2.5kg. BSL140 – Post 19.5kg. / Sleeve 5.5kg.
Locking:	Sleeve cap locks to post with padlock. (Padlock sold separately).
Installation:	In-ground sleeves are available in either core-drilled or new concrete models. Please specify when ordering.



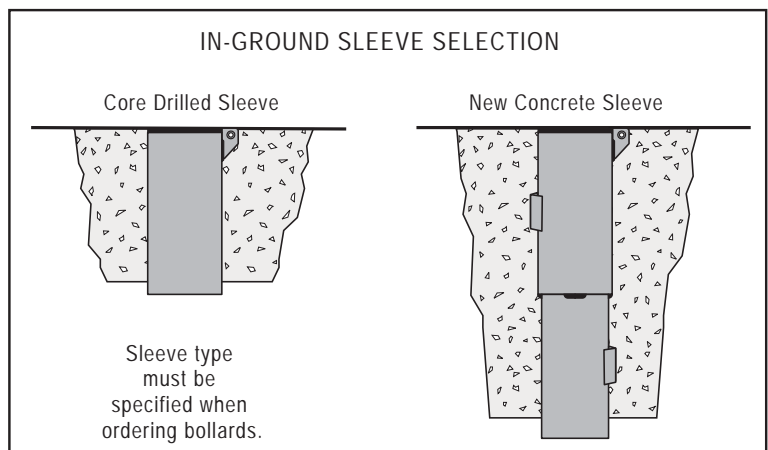
Double hanging holder.



Surface mount holder with optional padlock.



PART No.	DESCRIPTION
BSL63-G	Sleeve-lok 63mm freestanding post & sleeve (on request) – Galvanised.
BSL63	Sleeve-lok 63mm freestanding post & sleeve (on request) – Safety yellow powder coated
BSL63S-CD	Additional core drilled sleeve (63mm)
BSL63S-NC	Additional new concrete sleeve (63mm)
BSL63H	63mm diameter surface mount holder
BSL90-G	Sleeve-lok 90mm freestanding post & sleeve – Galvanised
BSL90	Sleeve-lok 90mm freestanding post & sleeve – Safety yellow powder coated
BSL90S-CD	Additional core drilled sleeve (90mm)
BSL90S-NC	Additional new concrete sleeve (90mm)
BSL90H	Sleeve-lok 90mm surface mount storage unit
BHH901	90mm wall mount storage unit (single)
BHH90	90mm wall mount storage unit (double)
BSL140-G	Sleeve-lok 140mm freestanding post & sleeve – Galvanised
BSL140	Sleeve-lok 140mm freestanding post & sleeve – Safety yellow powder coated
BSL140S-CD	Additional core drilled sleeve (140mm)
BSL140S-NC	Additional new concrete sleeve (140mm)
BSL140H	Sleeve-lok 140mm surface mount storage unit
BPL2	Padlock – high security 9mm shielded shackle



RETRACTABLE BOLLARDS

Retractable bollards are designed for medium security applications such as traffic and parking control. They offer a simple, trouble free operation proven over many years of installation.

Note: A retractable bollard should not be used where high security locking is required, such as car yards etc. For these applications insurance companies insist on our "Cam-lok" removable bollards.

Value features:

- » Locks in both up and down positions.
- » Strong circular design 90mm diameter x 5mm wall.
- » Black anti-slip surface on top of bollard.
- » Unique low cost 'T' handle key.
- » Convenient: no loose posts to store.
- » Powder coated post with galvanised in ground casing.
- » Trouble free design. Only 2 moving parts.
- » Internal locking system can't be tampered with or fouled by dirt or water.

Note: 2 keys supplied per order. Additional keys may be purchased.

Specifications

Description:	Retractable bollard for vehicle access and parking control.
Material:	Bollards 90mm diameter with 5mm wall mild steel. In ground casing 140mm with 5mm wall mild steel.
Finish:	Bollards safety yellow powder coat. In-ground casing hot dip galvanised. Black anti-slip surface at top.
Height:	Above ground 900mm. Below ground 1150mm.
Weight:	BR900 41.5kg. / Operating weight 6kgs
Locking:	Unique internal locking mechanism with 'T' handle key.
Installation:	Excavation and concrete footing.

PART No.	DESCRIPTION
BR900	Retractable bollard assembly
BR900R	Replacement bollard
BRKEY	Additional 'T' handle key for retractable bollard



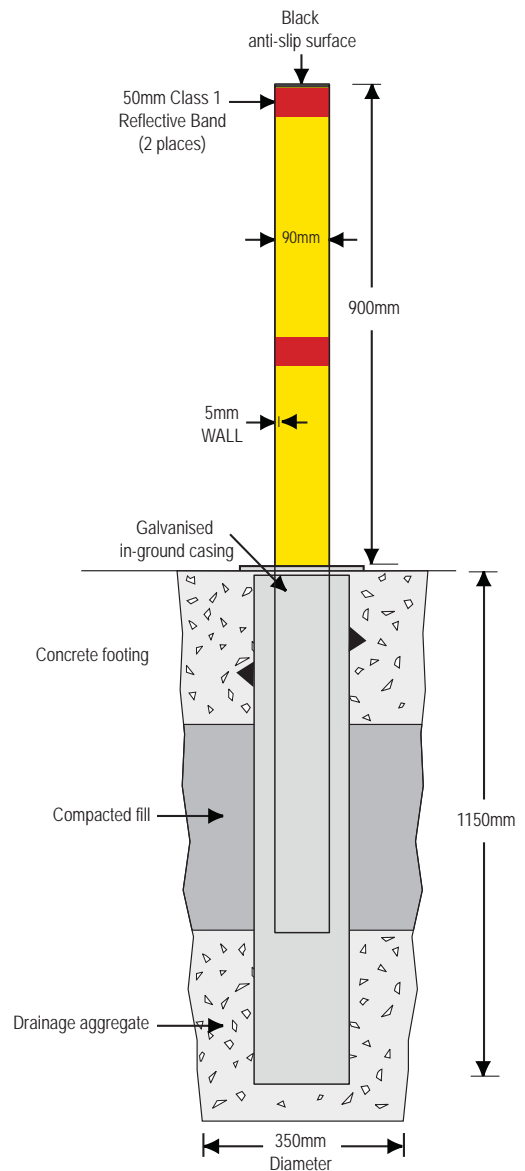
1. Locks in down position.



2. Turn to unlock and lift.



3. Turn to lock in up position.



The BR900 retractable bollard has only two moving parts. The bollard itself which raises, lowers and rotates through 180 degrees for locking, and the internal locking rod which locks the bollard in both the up and down positions.

IMPORTANT NOTE: when lifting the bollard the internal locking rod must be engaged by the key. Failure to do so will result in the bollard not being locked when in the raised position. SEE CUT-AWAY VIEWS BELOW.



1. Insert key with teeth facing narrow side of bollard.



2. With key fully inserted move to upright position to engage locking rod.



3. Key shown correctly inserted prior to lifting.



4. Lift key until it stops. Locking rod is now disengaged.



5. Rotate bollard to locked or unlocked position. Release key to re-engage locking rod. Check lock.

RETRACTABLE BOLLARDS

Installation Procedure:

1. Set out and bore holes approximately 500mm diameter. Recommended spacing for bollards is 1400mm maximum, centre to centre. Holes should be 100mm deeper than the length of the galvanised ground casing. (PHOTO 1).
2. Place coarse gravel in the bottom of the hole, sit the bollard on this base until the top flange plate is approximately 10mm above the natural ground level. Ensure bollard is plumb then place more gravel around the bollard until the hole is approximately $\frac{1}{3}$ full. (PHOTO 2).
3. Replace some of the excavated soil from the hole and compact until the hole is approximately $\frac{2}{3}$ full. Check the operation of the bollard. (PHOTO 3).
4. When satisfied the bollard is plumb and at the correct height, cover the top with tape to prevent entry of cement into bollard casing. Fill the balance of the hole with 35-50 mpa concrete. Add steel reinforcing if required. (PHOTO 4).
5. Finish off concrete as desired, remove the protective tape and clean around the bollard and top flange. (PHOTO 5).
6. Stand back and admire your beautiful work. Well done! (PHOTO 6).



1.



2.



3.



4.



5.



6.



PLEASE NOTE

- a. When finishing off the concrete, taper the surface slightly away from the surface flange. This will reduce the amount of water that finds its way into the ground casing.
- b. The coarse gravel in the bottom of the hole acts as a drainage sump for water that finds its way into the casing. This is normal and should not be seen as a problem.
- c. Never allow the bollard to free-fall from the raised position. Always lower using the 'T' handle key.

Photos courtesy of R.L. Reed Inc. (Las Vegas).

LEGEND



AUSTRALIAN CONTENT

This product has been designed, developed and is either completely or substantially manufactured in Australia. (The minimum Australian content is between 50 and 100%).



NEW AND UNIQUE

This is a new and unique product. It has either been designed, developed and manufactured by the Barrier Group Pty. Ltd. or it is being seen here for the first time.



100% RECYCLABLE

This product is manufactured from virgin grade raw materials and is 100% recyclable using existing, readily available recycling technology and services.



RECYCLED MATERIALS

This product has been manufactured from either a combination of recycled materials and virgin grade materials or entirely from recycled materials.



HOT DIP GALVANISED

This product has been hot dip galvanised prior to any surface coatings being applied. Hot dip galvanised offers vastly improved corrosion protection and extended life in harsh environments.



FIXINGS INCLUDED

This product comes complete with all the necessary fixings to complete the standard installation. When comparing competitors prices against our own, always ensure they have included the fixings with the product (excludes gravel spikes).



5 YEAR WARRANTY

This product carries a 5 year limited warranty against structural failure due to faulty materials or workmanship in our manufactured products, OR structural failure and major fading due to U.V. degradation in our injection moulded products.

(For full conditions visit www.barriergroup.com.au).

WARNING

© Barrier Group Pty. Ltd. takes the protection of its intellectual property (IP) seriously and will not hesitate to pursue legal action against any individual, group or organization attempting to steal, copy or duplicate any of its proprietary designs OR anyone who imports, sells or distributes illegal copies or duplicates of its proprietary designs.

IT'S AGAINST THE LAW – AVOID THE PAIN!